Amendments to the Claims:

This listing of the claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) An authoring method for use in creating an audiovisual product, comprising the steps of:

defining a plurality of components, the components implicitly representing functional sections of audiovisual content with respect to one or more raw content objects, and a plurality of transitions that represent movements between the plurality of components;

expanding the plurality of components and the plurality of transitions to provide a set of explicitly ~~realised~~ realized AV assets and an expanded intermediate data structure of nodes and links, where each node is associated with an AV asset of the set and the links represent movement from one node to another; and

creating an audiovisual product in a predetermined output format, using the AV assets and the expanded intermediate data structure of the nodes and the links, wherein the audiovisual product is operable to facilitate random number generation.

2. (Original) The method of claim 1, wherein the defining step comprises defining at least one information component that comprises a reference to a raw content object.

3. (Original) The method of claim 2, wherein the reference denotes a file path to a location where the raw content object is stored.

4. (Currently Amended) The method of ~~any preceding~~ claim 1, wherein the defining step comprises defining at least one choice component comprising a reference to at least one raw content object, and at least one authoring parameter.

5. (Original) The method of claim 4, wherein the at least one authoring parameter is adapted to control a selection or modification of the at least one raw content object.

6. (Currently Amended) The method of claim 4 ~~or 5~~, wherein the at least one authoring parameter comprises a runtime variable available during playback of the audiovisual product.

7. (Currently Amended) The method of claim 4 ~~4, 5 or 6~~, wherein the at least one authoring parameter comprises an authoring-only parameter that will not be available during playback of the audiovisual product.

8. (Currently Amended) The method of ~~any of~~ claims 4 ~~to 7~~, wherein the choice component comprises a reference to a presentation template and a reference to at least one substitutable raw content object to be placed in the template according to the at least one authoring parameter.

9. (Currently Amended) The method of ~~any preceding~~ claim 1, wherein the defining step comprises defining at least one meta-component representing a set of components and transitions.

10. (Original) The method of claim 9, wherein the at least one meta-component is a procedurally defined representation of the set of components and transitions.

11. (Currently Amended) The method of ~~any preceding~~ claim 1, wherein each transition represents a permissible movement from one component to another component.

12. (Currently Amended) The method of ~~any preceding~~ claim 1, wherein each transition is associated with a triggering event.

13. (Original) The method of claim 12, wherein the triggering event is an event occurring during playback of the audiovisual product.

14. (Original) The method of claim 13, wherein the triggering event is receiving a user command, or expiry of a timer.

15. (Currently Amended) The method of ~~any preceding~~ claim 1, further comprising the step of checking expected conformance of the audiovisual product with the predetermined output format, using the plurality of components and the plurality of transitions.

16. (Original) The method of claim 15, wherein the predetermined output format is a hierarchical data structure having limitations on a number of objects that may exist in the data structure at each level of the hierarchy, and the checking step comprises predicting an expected number of objects at a level and comparing the expected number with the limitations of the hierarchical data structure.

17. (Currently Amended) The method of claim 15 ~~or 16~~, wherein the checking step comprises predicting an expected total size of the audiovisual product, and comparing the expected total size against a storage capacity of a predetermined storage medium.

18. (Currently Amended) The method of ~~any preceding~~ claim 1, wherein the expanding step comprises, for each component, building one or more of the set of explicitly realised AV assets by reading and manipulating the one or more raw content objects.

19. (Currently Amended) The method of ~~any preceding~~ claim 18, wherein:

the defining step comprises defining at least one choice component comprising a reference to a plurality of raw content objects and at least one authoring parameter; and

the building step comprises:

selecting one or more raw content objects from amongst the plurality of raw content objects using the at least one authoring parameter; and

combining the selected raw content objects to form one of the AV assets.

20. (Original) The method of claim 19, comprising repeating the selecting and combining steps to automatically build a plurality of the explicitly realised AV assets from the one of the components.

21. (Currently Amended) The method of any preceding claim, wherein the expanding step comprises:

creating from each one of the plurality of components one or more explicitly realised AV assets to provide the set of AV assets;

creating the expanded intermediate data structure wherein each node represents one AV asset of the set; and

creating a set of links between the nodes.

22. (Currently Amended) The method of ~~any preceding~~ claim 1, wherein each transition is associated between first and second components, and creating the set of links comprises evaluating each transition to create one or more links, each of the links being between a node created from the first component and a node created from the second component.

23. (Currently Amended) The method of ~~any preceding~~ claim 1, wherein the expanding step comprises evaluating at least one of the transitions to create exit logic associated with at least one first node, evaluating one of the components to create entry logic associated with at least one second node, and providing a link between the first and second nodes according to the entry logic and the exit logic.

24. (Original) The method of claim 23, wherein at least one of the transitions is associated with a triggering event, and the expanding step comprises evaluating the triggering event to determine the exit logic associated with the at least first one node.

25. (Currently Amended) The method of ~~any preceding~~ claim 1, further comprising the step of checking expected conformance of the audiovisual product with the predetermined output format, using the AV assets and the expanded intermediate data structure of nodes and links.

26. (Original) The method of claim 25, wherein the predetermined output format is a hierarchical data structure having limitations on a number of objects that may exist in the data structure at each level of the hierarchy, and the checking step comprises predicting an expected

number of objects at a level and comparing the expected number with the limitations of the hierarchical data structure.

27. (Original) The method of claim 26, wherein the checking step comprises predicting an expected total size of the audiovisual product, and comparing the expected total size against a storage capacity of a predetermined storage medium.

28. (Currently Amended) The method of ~~any preceding~~ claim 1, wherein the AV assets have a data format specified according to the predetermined output format.

29. (Currently Amended) The method of ~~any preceding~~ claim 1, wherein the AV assets each have a data format according to the predetermined output format, whilst the raw content objects are not limited to a data format of the predetermined output format.

30. (Currently Amended) The method of ~~any preceding~~ claim 1, wherein the predetermined output format is a DVD-video specification.

31. (Currently Amended) The method of ~~any preceding~~ claim 1, wherein the AV assets each comprise a video object, zero or more audio objects, and zero or more sub-picture objects.

32. (Currently Amended) The method of ~~any preceding~~ claim 1, wherein the AV assets each comprise at least one video object, zero to eight audio objects, and zero to thirty-two sub-picture objects, according to the DVD-video specification.

33. (Currently Amended) The method of ~~any preceding~~ claim 1, wherein the creating step comprises creating objects in a hierarchical data structure defined by the predetermined output format with objects at levels of the data structure, according to the intermediate data structure of nodes and links, and where the objects in the hierarchical data structure include objects derived from the explicitly ~~realised~~ realized AV assets.

34. (Currently Amended) The method of ~~any preceding~~ claim 1, wherein the predetermined output format is a DVD-video specification and the creating step comprises creating DVD-video structure locations from the nodes of the expanded intermediate data structure, placing the explicitly realised AV assets at the created structure locations, and substituting the links of the expanded intermediate data structure with explicit references to the DVD-video structure locations.

35. (Currently Amended) An authoring method for use in creating at least one of an audiovisual product or a DVD-video product, comprising the steps of:

creating a plurality of components representing ~~parameterised~~ parameterized sections of audiovisual content, and a plurality of transitions representing movements between components;

expanding the plurality of components and the plurality of transitions to provide a set of AV assets and an expanded data structure of nodes and links, where each node is associated with an AV asset of the set and the links represent movement from one node to another; and

creating a DVD-video format data structure from the AV assets, using the nodes and links, wherein the audiovisual product or DVD-video product is operable to facilitate random number generation.

36. (Currently Amended) The method of claim 35 ~~or 36~~, comprising creating at least one information component comprising a reference to an item of AV content.

37. (Original) The method of claim 35, comprising creating at least one choice component comprising a reference to at least one item of AV content, and at least one parameter for modifying the item of AV content.

38. (Original) The method of claim 37, wherein the choice component comprises a reference to a presentation template and a reference to at least one item of substitutable content to be placed in the template according to the at least one parameter.

39. (Currently Amended) The method of claim 37 ~~or 38~~, wherein the choice component comprises at least one runtime variable available during playback of an audiovisual product in a DVD player, and at least one authoring parameter not available during playback.

40. (Currently Amended) The method of ~~any of~~ claim~~s~~ 35 ~~to 39~~, comprising creating at least one meta-component representing a set of components and transitions.

41. (Currently Amended) The method of ~~any of~~ claim~~s~~ 35 ~~to 40~~, wherein each transition represents a permissible movement from one component to another component, each transition being associated with a triggering event.

42. (Original) The method of claim 41, wherein a triggering event includes receiving a user command, or expiry of a timer.

43. (Currently Amended) The method of ~~any of~~ claim~~s~~ 35 ~~to 42~~, wherein the expanding step comprises:

creating from each one of the plurality of components one or more AV assets to provide the set of AV assets;

creating the expanded data structure wherein each node represents one AV asset of the set; and

creating a set of links between the nodes.

44. (Currently Amended) The method of claim 37 ~~or any claim dependent thereon~~, wherein the expanding step comprises evaluating each choice component to create a plurality of AV assets according to each value of the at least one parameter.

45. (Original) The method of claim 44, wherein evaluating each choice component comprises creating entry logic associated with at least one node and/or evaluating at least one transition to create exit logic associated with at least one node, and providing a link between a pair of nodes according to the entry logic and the exit logic.

46. (Currently Amended) The method of ~~any of~~ claims 35 ~~to 45~~, comprising the step of checking expected conformance with the DVD-video format using the created components and transitions.

47. (Currently Amended) The method of ~~any of~~ claims 35 ~~to 45~~, comprising the step of checking expected conformance with the DVD-video format using the set of AV assets and the expanded data structure of nodes and links.

48. (Currently Amended) An authoring method for use in creating an audiovisual product according to a DVD-video specification, comprising the steps of:

generating a set of AV assets each comprising a video object, zero or more audio objects and zero or more sub-picture objects, and an expanded data structure of nodes and links, where each node is associated with one AV asset of the set and the links represent navigational movement from one node to another; and

creating a DVD-video format data structure from the set of AV assets, using the nodes and links;

the method ~~characterised~~ characterized by the steps of:

creating a plurality of components and a plurality of transitions, where a component implicitly defines a plurality of AV assets by referring to a presentation template and to items of raw content substitutable in the presentation template, and the plurality of transitions represent navigational movements between components; and

expanding the plurality of components and the plurality of transitions to generate the set of AV assets and the expanded data structure of nodes and links, wherein the audiovisual product is operable to facilitate random number generation.

49. (Currently Amended) A storage or recording medium storing computer executable instructions for performing the method of ~~any of~~ claims 1 ~~to 34~~.

50. (Currently Amended) A storage or recording medium storing computer executable instructions for performing the method of ~~any of~~ claims 35 ~~to 47~~.

51. (Original) A storage or recording medium storing computer executable instructions for performing the method of claim 48.

52. (Currently Amended) A storage or recording medium storing an audiovisual product authored according to the method of ~~any of~~ claims 1 ~~to 34~~.

53. (Currently Amended) A storage or recording medium storing an audiovisual product authored according to the method of ~~any of~~ claims 35 ~~to 47~~.

54. (Original) An optical disk recording medium having recorded thereon an audiovisual product authored according to the method of claim 48.

Claims 55-57 (Cancelled).

58. (Currently Amended) A method as claimed in ~~any preceding~~ claim 1 wherein the audiovisual product comprises data representing a video sequence and a number of associated data each having a corresponding command to be invoked in response to at least one event and data to derive a first output value from or associated with an invoked command.

59. (Original) A method as claimed in claim 58 wherein the data representing the video sequence comprises a plurality of data structures; each of the data structures being associated with a respective one of the corresponding commands.

60. (Original) A method as claimed in claim 59 in which the plurality of data structures comprises a plurality of Group-of-Pictures structures.

61. (Currently Amended) A method as claimed in ~~any of~~ claims 58 ~~to 60~~ in which the associated data comprises at least a command to influence the operation of at least one of a navigation engine and a presentation engine.

62. (Currently Amended) A method as claimed in ~~any of~~ claims 58 ~~to 61~~ in which the corresponding commands comprise associated values used to produce the first value.

63. (Currently Amended) A method as claimed in ~~any of~~ claims 58 ~~to 62~~ in which the corresponding commands comprise respective navigation commands associated with data representing a further video sequence.

64. (Original) A method as claimed in claim 63 in which the navigation commands retrieve the data representing the further video sequence and cause the presentation engine to derive the further video sequence from the data representing the further video sequence.

65. (Currently Amended) A method as claimed in ~~any of~~ claims 58 ~~to 64~~ in which the means to derive the first value comprises a register arranged to store a time varying value during the output of the video sequence by the presentation engine.

66. (Currently Amended) A method as claimed in ~~any of~~ claims ~~58 to~~ 65 in which the register is a GPRM register set to counter mode.

67. (Currently Amended) A method as claimed in ~~any of~~ claims ~~58 to~~ 66 in which the means to derive the first value comprises a combiner to combine the time varying value of the register with data associated with the invoked command.

68. (Currently Amended) A method as claimed in ~~any of~~ claims ~~58 to~~ 67 in which the combiner comprises an adder to add the time varying value of the register to the data associated with the invoked command.

69. (Currently Amended) A method as claimed in ~~any of~~ claims 58 ~~to 68~~ in which the means to derive the first value further comprises means to derive the first value from an initialisation value.

70. (Currently Amended) A method as claimed in ~~any of~~ claim~~s 58 to~~ 68 in which the initialisation value is generated by a random number generator.

71. (Currently Amended) A method as claimed in ~~any of~~ claim~~s 58 to~~ 70 in which the means to generate a sequence of values from the first value.

72. (Original) A method as claimed in claim 71 in which the means to generate the sequence comprises means to generate the sequence with a predeterminable number of non-repeating values.

73. (Currently Amended) A method as claimed in ~~either of~~ claim~~s~~ 71 ~~and 72~~ in which the means to generate the sequence comprises a calculator to perform an iterative operation to calculate the values of the sequence.

74. (Original) A method as claimed in claim 73 in which iterative operation calculates $r_{i+1}=ar_i + b \bmod c$, where a and b are constants, r_1 is the first value and c is prime.

75. (Currently Amended) A method as claimed in ~~any of~~ claim~~s~~ 1 ~~to 57~~ further comprising the step of creating or obtaining data representing a video sequence and a number of associated data each having a corresponding command to be invoked in response to at least one event and data to derive a first output value from or associated with an invoked command.

76. (Original) A method as claimed in claim 75 wherein the step of creating or obtaining the data representing the video sequence comprises creating or obtaining a plurality of data structures; each of the data structures being associated with a respective one of the corresponding commands.

77. (Original) A method as claimed in claim 76 in which the step of creating or obtaining the plurality of data structures comprises creating or obtaining a plurality of Group-of-Pictures structures.

78. (Currently Amended) A method as claimed in ~~any of~~ claim~~s~~ 75 ~~to 77~~ in which the step of creating or obtaining the associated data comprises the step of creating or obtaining at least a command to influence the operation of at least one of a navigation engine and a presentation engine.

79. (Currently Amended) A method as claimed in ~~any of~~ claim~~s~~ 75 ~~to 78~~ in which the step of creating or obtaining the corresponding commands comprise the step of creating or obtaining associated values used to produce the first value.

80. (Currently Amended) A method as claimed in ~~any of~~ claim~~s~~ 75 ~~to 79~~ in which the step of creating or obtaining corresponding commands comprise the step of creating or obtaining respective navigation commands associated with data representing a further video sequence.

81. (Original) A method as claimed in claim 80 in which the step of creating or obtaining the navigation commands comprises the step of creating or obtaining commands to retrieve the data representing the further video sequence and cause the presentation engine to derive the further video sequence from the data representing the further video sequence.

82. (Currently Amended) A method as claimed in ~~any of~~ claim~~s~~ 75 ~~to 81~~ in which the step of creating means to derive the first value comprises the step of creating or obtaining a register arranged to store a time varying value during the output of the video sequence by the presentation engine.

83. (Currently Amended) A method as claimed in ~~any of~~ claim~~s 75 to~~ 82 in which the register is a GPRM register set to counter mode.

84. (Currently Amended) A method as claimed in ~~any of~~ claim~~s 75 to~~ 83 in which the step of creating or obtaining means to derive the first value comprises the step of creating or obtaining a combiner to combine the time varying value of the register with data associated with the invoked command.

85. (Currently Amended) A method as claimed in ~~any of~~ claims ~~75 to~~ 84 in which the step of creating or obtaining a combiner comprises the step of creating or obtaining an adder to add the time varying value of the register to the data associated with the invoked command.

86. (Currently Amended) A method as claimed in ~~any of~~ claims ~~75 to~~ 85 in which the step of creating or obtaining means to derive the first value further comprises the step of creating or obtaining means to derive the first value from an initialisation value.

87. (Currently Amended) A method as claimed in claim 86 in which the step of obtaining or creating means to derive the first value from an ~~initialisation~~ initialization value comprises the step of generating the ~~initialisation~~ initialization value using a random number generator.

88. (Currently Amended) A method as claimed in ~~any of~~ claims 75 ~~to 86~~ in further comprising the step of creating or generating means to generate a sequence of values from the first value.

89. (Original) A method as claimed in claim 88 in which the step of creating or obtaining means to generate the sequence comprises the step of obtaining or creating means to generate the sequence with a predeterminable number of non-repeating values.

90. (Currently Amended) A method as claimed in ~~either of~~ claims ~~88 and~~ 89 in which the step of creating or obtaining means to generate the sequence comprises the step of creating or obtaining a calculator to perform an iterative operation to calculate the values of the sequence.

91. (Original) A method as claimed in claim 90 in which step of creating or obtaining a calculator to perform the iterative operation comprises the step of creating or obtaining means to calculate $r_{i+1}=ar_i + b \bmod c$, where a and b are constants, r_1 is the first value and c is prime.

92. (Original) A data processing system comprising a reader to read data representing a video sequence and a number of associated data each having a corresponding command; a

presentation engine for outputting the video sequence derived from the data representing the video sequence, a navigation engine, responsive to an event, to invoke one of the corresponding commands according to the output of the video sequence; and means to derive a first value from the invoked command of the corresponding commands.

93. (Original) A data processing system as claimed in claim 92 in which the data representing the video sequence comprises a plurality of data structures; each of the data structures being associated with a respective one of the corresponding commands.

94. (Original) A data processing system as claimed in claim 93 in which the plurality of data structures comprises a plurality of Group-of-Pictures structures.

95. (Currently Amended) A data processing system as claimed in ~~any of~~ claims 92 ~~to 94~~ in which the associated data comprises at least a command to influence the operation of at least one of the navigation engine and the presentation engine.

96. (Currently Amended) A data processing system as claimed in ~~any of~~ claims 92 ~~to 95~~ in which the corresponding commands comprise associated values used to produce the first value.

97. (Currently Amended) A data processing system as claimed in ~~any of~~ claims 92 ~~to 96~~ in which the corresponding commands comprise respective navigation commands associated with data representing a further video sequence.

98. (Original) A data processing system as claimed in claim 97 in which the navigation commands retrieve the data representing the further video sequence and cause the presentation engine to derive the further video sequence from the data representing the further video sequence.

99. (Currently Amended) A data processing system as claimed in ~~any of~~ claims 92 ~~to 98~~ in which the means to derive the first value comprises a register arranged to store a time varying value during the output of the video sequence by the presentation engine.

100. (Original) A data processing system as claimed in claim 99 in which the register is a GPRM register set to counter mode.

101. (Currently Amended) A data processing system as claimed in ~~either of~~ claims 99 ~~and 100~~ in which the means to derive the first value comprises a combiner to combine the time varying value of the register with data associated with the invoked command.

102. (Original) A data processing system as claimed in claim 101 in which the combiner comprises an adder to add the time varying value of the register to the data associated with the invoked command.

103. (Currently Amended) A data processing system as claimed in ~~any of~~ claims 92 ~~to 102~~ in which the means to derive the first value further comprises means to derive the first value from an ~~initialisation~~ initialization value.

104. (Currently Amended) A data processing system as claimed in claim 103 in which the ~~initialisation~~ initialization value is generated by a random number generator.

105. (Currently Amended) A data processing system as claimed in ~~any of~~ claims 92 ~~to 104~~ in further comprising means to generate a sequence of values from the first value.

106. (Original) A data processing system as claimed in claim 105 in which the means to generate the sequence comprises means to generate the sequence with a predeterminable number of non-repeating values.

107. (Currently Amended) A data processing system as claimed in ~~either of~~ claims~~s~~ 105 ~~and 106~~ in which the means to generate the sequence comprises a calculator to perform an iterative operation to calculate the values of the sequence.

108. (Original) A data processing system as claimed in claim 107 in which iterative operation calculates $r_{i+1}=ar_i + b \bmod c$, where a and b are constants, r_1 is the first value and c is prime.

109. (Original) A storage medium comprising data representing a video sequence and a number of associated data each having a corresponding command; and data to derive a first value from one of the corresponding commands in response to an event.

110. (Original) A storage medium as claimed in claim 109 in which the data representing the video sequence comprises a plurality of data structures; each of the data structures being associated with a respective one of the corresponding commands.

111. (Original) A storage medium as claimed in claim 110 in which the plurality of data structures comprises a plurality of Group-of-pictures structures.

112. (Original) A storage medium as claimed in claim 111 in which the associated data comprises at least a command to influence the operation of at least one of a navigation engine and a presentation engine.

113. (Currently Amended) A storage medium as claimed in ~~any of~~ claims 109 ~~to 112~~ in which the corresponding commands comprise respective navigation commands associated with data representing a further video sequence.

114. (Currently Amended) A storage medium as claimed in ~~any of~~ claims 109 ~~to 113~~ in which the navigation commands retrieve the data representing the further video sequence and cause the presentation engine to derive the further video sequence from the data representing the further video sequence.

115. (Currently Amended) A storage medium as claimed in ~~any of~~ claims 109 ~~to 114~~ further comprising a command to arrange for a register to produce a time varying value during output of the video sequence by the presentation engine.

116. (Original) A storage medium as claimed in claim 115 in which the command to arrange for the register to produce the time varying value comprises a command to cause a GPRM to assume a counter mode.

117. (Currently Amended) A storage medium as claimed in ~~either of~~ claims 115 ~~and 116~~ further comprising data to derive a first value, in response to an event, from one of the corresponding commands.

118. (Currently Amended) A storage medium as claimed in ~~any of~~ claims ~~115 to~~ 117 in which the data to derive the first value further comprises data to derive the first value from an initialisation value.

119. (Currently Amended) A storage medium as claimed in claim 118 in which the initialisation value is generated by a random number generator.

120. (Currently Amended) A storage medium as claimed in ~~any of~~ claims 115 ~~to 119~~ further comprising data to generate a sequence of values from the first value.

121. (Original) A storage medium as claimed in claim 120 in which the data to generate the sequence comprises data to generate a sequence comprising a predeterminable number of non-repeating values.

122. (Currently Amended) A storage medium as claimed in ~~either of~~ claims 120 ~~and 121~~ in which the data to generate the sequence comprises a command to perform an iterative operation to calculate the values of the sequence.

123. (Original) A storage medium as claimed in claim 122 in which the iterative operation calculates $r_{i+1}=ar_i + b \bmod c$, where a and b are constants, r_1 is the first value and c is prime.

124. (Currently Amended) A storage medium as claimed in ~~any of~~ claims 109 ~~to 123~~, in which the medium is a DVD disc or other optical disc.

125. (Original) A data processing system comprising means to play an interruptible or skipable video sequence; and a random number generator for generating a random number associated with an interruption of the interruptible or skipable video sequence.

126. (Original) A data processing method comprising the steps of playing an interruptible or skipable video sequence; and generating a random number associated with an interruption of the interruptible or skipable video sequence.

Claims 127 and 128 (Cancelled).